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ABSTRACT

The School-to-Work Urban Opportunities Program represents a 5-year commitment by the Houston Independent School District (HISD) (Texas) and the Houston Community College System to establish a program to facilitate students' development of the skills and abilities necessary to secure meaningful employment. The program involves one high school and its feeder middle school and elementary schools in career awareness and preparation programs. The second year evaluation continued to assess the formation and implementation of the program. The program serves a population of students who are predominantly of minority descent and from low socioeconomic background. Responses to student (n=66) and teacher surveys (n=20) indicated their recognition of the importance of such a program. The academic performance of students in the program schools increased in reading, writing, and mathematics. Employers (n=24) indicated that they generally found program students well prepared in terms of basic skills. Recommendations for program improvement center on better alignment of school-to-work activities and school district initiatives or programs. Appendixes contain the student survey and responses, the teacher survey and responses, the employer survey and responses, and student academic performance data by school. (Contains nine tables and seven references.) (SLD)

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ED 428 172

RESEARCH

Report on an Educational Grant

Department of Research and Accountability

School-To-Work

Urban Opportunities Grant

Year Two: 1996–97

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Executive Summary

School-to-Work Urban Opportunities Program: Year Two– 1996–97

Program Description

During 1996–97, the implementation of a school-to-work program, the School-to-Work Urban Opportunities Program (STWUOP) was continued through a partnership between the Houston Independent School District (HISD) and the Houston Community College System (HCCS). The program represents a five year commitment by these institutions to establish an effective and efficient program that will facilitate students' development of the skills and abilities necessary for them to secure meaningful employment after the completion of their educational pursuits. The program involves students from the Furr High School vertical team: Furr High School; Holland Middle School; and Clinton Park, R.P. Harris, Oates, Pleasantville, Port Houston, and Whittier Elementary Schools.

In order to fully evaluate the success of STWUOP, a series of evaluations will be produced and disseminated to the program's stakeholders (students, public school educators, post-secondary educators, labor representatives, business and industry representatives, and community members). These evaluations will chronicle and assess the development, implementation and finally the overall effects and impact of this school-to-work program. The purpose of the second year evaluation of STWUOP was to continue to descriptively assess the formation and implementation of the program and to begin and develop the processes to be used in the third year summative evaluation. Expressly, this process and product evaluation was designed in order to answer the following questions:

1. What were the demographics of the schools and students who are served by the School-to-Work Urban Opportunities Program?

2. What were the student and teacher perceptions of what should be included in a School-to-Work program?

3. How did the School-to-Work Urban Opportunities Program involve stakeholders representing community, industry, and labor in the program?

4. What was accomplished by the School-to-Work Urban Opportunities Program Advisory Board during the second year of the program?

5. What were the results from the assessment of student performance and accountability measures?

6. What were the employers' perceptions of Furr High School students who participated in Career Preparation activities?

7. What was the level of implementation of the School-to-Work Urban Opportunities Program at Furr High School vertical team elementary schools?

Findings

- The demographic analysis of the students served by the program indicated that a diverse student population is enrolled in participating HISD schools. Globally, STWUOP serves a population of students who are predominately of minority descent and from low socio-economic backgrounds.

- Teacher and student perceptions, as recorded by a battery of surveys, reflected the timeliness of the program. The majority of respondents believed that most of the components of a school-to-work program included in the surveys were of at least moderate importance to such a program. Specifically, more than half of the teachers surveyed believed that a school-to-work program would be extremely valuable to their students.

- There are a wide range of diverse activities that are available to stakeholders when they become involved in the School-to-Work Urban Opportunities Program. These include Career Awareness,

Career Exploration, and Career Preparation activities that allow stakeholders to have direct interactions with participating students, as well as activities that allow stakeholders to influence the education process at the school and districtwide levels.

- The development of a representative and functioning School-to-Work Urban Opportunities Program Advisory Board was observed. This can guarantee that the STWUOP will be able to make the transition from a federally funded program to a non-profit self-sufficient entity. Currently, the Advisory Board provides a vital link between the world of work and the world of education, that allows the board to oversee and support the implementation of school-based learning activities, work-based learning activities, and connecting activities.

- Globally, when compared to baseline 1994 data, the academic performance of students at participating School-to-Work Urban Opportunities Program schools increased substantially during 1996–97 in the areas of Math, Reading, and Writing.

- The results from the assessment of students involved in Career Preparation activities indicated that employers generally found these students to be well prepared in terms of basic work-skills and SCANS characteristics. The one area that a perceived need for improvement was detected was in terms of motivation related work characteristics.

- There is a need to align STWUOP activities and objectives with HISD initiatives or programs. For example, School-to-Work activities would benefit from the methods, instructional techniques, activities, and the content areas found in Project Reconnect (a parental involvement initiative), The Balanced Approach to Reading Initiative, the Curriculum Alignment Initiative, Character Education, and Bilingual Education.

- Analysis of STWUOP's implementation process found that the program has been established in participating elementary schools, program activities have been initiated, partnerships with local businesses and industry have been formed, and the materials and guidelines describing and monitoring the program have been developed and disseminated at the elementary school level.

Recommendations

1. School-to-Work activities should be aligned with HISD initiatives or programs. For example, School-to-Work activities would benefit from the methods, instructional techniques, activities, and the content areas found in Project Reconnect (a parental involvement initiative), The Balanced Approach to Reading Initiative, the Curriculum Alignment Initiative, Character Education, and Bilingual Education.

2. Develop a means to determine the extent to which Special Populations (Special Education, limited English proficient, and at-risk) are being served by the School-to-Work Urban Opportunities Program.

3. Continue to communicate the STWUOP philosophy and goals to the teachers and staff of participant schools. Expand this communication effort to include parents and community members

4. Recruit several parents of students enrolled in Furr High School vertical team schools to be members of the School-to-Work Urban Opportunities Program Advisory Board.

5. Monitor the areas of business and education integration closely in order to ensure that counter productive activities are not implemented. Specifically, many business practices have not been evaluated sufficiently, therefore these practices should be thoroughly examined before they are infused into the education process.

6. Continue developing curriculum plans that allow students who begin a program at Furr High School to continue at HCCS and beyond. In addition, increase the focus on the motivation training of students prior to their involvement in Career Preparation activities.

School-to-Work Urban Opportunities Program: Year Two– 1996–97

Purpose: *The purpose of this report was to build on the evaluation process from first year of the program and to act as a preliminary or intermediate report for the summative third year report.*

Design: *This evaluation was designed to be a quantitative and qualitative assessment of four specific areas of the STWUOP: Student demographics; student and teacher perceptions; stakeholder involvement; and, program effectiveness.*

Population, Sample: *All of the stakeholder and participant groups were included in this evaluation. These groups included students, public school educators, post-secondary educators, labor representatives, business and industry representatives, and community members*

Methods: *Surveys, student records and data, program information and publications, observation methods, and quasi-ethnographic techniques were employed to collect data for this evaluation*

Findings: *Support for the presence and/or effectiveness of program components was sufficiently found in each of the four areas of the evaluation design. Expressly, the program served a diverse student population, teacher and student perceptions reflected the timeliness of the program, stakeholders participated in a wide range of activities that impact students, teachers and schools, and the program had a positive effect on student academic and job-related performance.*

Conclusions: *This evaluation establishes the methods necessary to complete a summative evaluation of the impact and effectiveness of the School-to-Work Urban Opportunities Program and provides intermediate support for the program. Specifically, the program met the demographic, stakeholder involvement, student and teacher perceptions, and program effectiveness criteria during the 1996–97 school year.*

Introduction

According to the School-to-Work report to Congress produced by the US Departments of Education and Labor (1996), School-to-Work programs are designed to link education reform with workforce development and economic development by engaging many stakeholders (students, public school educators, post-secondary educators, labor representatives, business and industry representatives, and community members), in designing and implementing a comprehensive, integrated system of education and workforce preparation that reflects local needs. It opens a variety of post-high school opportunities by integrating academic and occupational curriculum, school-based and work-based learning, and secondary and post-secondary education. School-to-work is also closely linked with the Goals 2000: Educate America Act, which provides a framework for State efforts to improve student academic achievement and establishes the National Skill Standards Board that is helping develop a system of voluntary occupational skill standards.

School-to-Work expands young people's choices in life by preparing them for high-skill careers, and further training or education, confident that they have the skills to succeed. Students have opportunities to learn academic subjects by seeing knowledge applied in the real world, and learn job-specific skills with stronger academic grounding. School-to-work also motivates them to continue learning because they see first hand how many good careers require post-secondary education or training.

Every School-to-Work program must contain three core elements known as School-Based Learning, Work-Based Learning and Connecting Activities. School-Based Learning is classroom instruction based on high academic and occupational skill standards. Work-Based Learning is work experience, structured training and mentoring at job sites. And last, Connecting Activities develop courses that integrate classroom and on-the job instruction, match students with participating employers, train job-site mentors and build and maintain bridges between school and work.

School-to-Work programs are advantageous for students because these programs allow them to accomplish many things:

- Students can choose from a wider range of occupations and educational opportunities.
- They have more opportunities for good jobs after graduation.
- They can obtain actual work experience while going to school.
- Students will develop potential contacts that may broaden employment options.
- The experience can boost self-confidence and experience success at school and work.
- Students receive personal assistance in attaining education and career goals.

Employers can reap rewards from School-to-Work programs because of the following reasons:

- They gain access to an expanded pool of qualified applicants.
- They can participate in curriculum development, ensuring that it meets industry requirements.
- Employers can evaluate potential employees in work settings prior to hiring.
- They can become involved in the education process, thereby helping improve the quality of life in the community.

School-to-Work programs benefit schools and school districts by providing a means to systematically change the education process. This process can result in the following benefits:

- Increased college placement and employment rates of graduates.
- More opportunities for teacher participation in improved professional development from recruitment to retirement.
- An Integrated academic curriculum with actual experiential activities.
- Reduced dropout rates, improved attendance and increased enrollment.
- Educators come to better understand real-world applications of academic knowledge.

Locally, The Houston Independent School District (HISD) and Houston Community College System (HCCS) partnership of Houston, Texas is in its second year of development and implementation of the School-to-Work Urban Opportunities Program (STWUOP). This program serves the high poverty, ten-census-tract area that comprises a significant part of the eastern sector of HISD. The goal of the initiative is to provide youth of this community with an improved educational system that will help them better identify and navigate paths to productive and progressively more rewarding roles in the workplace and to development a bond and commitment between all of the various stakeholder groups.

Program Description

In response to initiatives at the state and national levels, HISD and HCCS have worked together to aggressively develop the School-to-Work Urban Opportunities program for a majority of the HISD schools in the Furr High School vertical team: Furr High School; Holland Middle School; and Clinton Park, R.P. Harris, Oates, Pleasantville, Port Houston, and Whittier Elementary Schools. The goal of this program is to improve the education system and tailor it to the needs of students by helping them acquire the skills and knowledge needed to succeed in the modern workplace. Specifically, the program strives to increase the focus of the educational process on career orientated instruction that will facilitate the transition from school to dynamic and fulfilling careers. STWUOP offers components that many of the students will need for entry into high-skill, high-wage jobs.

The cumulative total number of persons actually enrolled in STWUOP during 1996–97 was 6,703, a 15% increase from the number of people served in 1995–96. This figure includes both the students in the Furr vertical team, their parents involved in GED classes, and Furr vertical team teachers enrolled in Spanish classes. Furr High School student activities included 11th and 12th graders touring the University of Houston, Central Campus, Career Awareness training from a career advisor for all Furr High School 9th graders, and 11th and 12th graders enrolled in cos-

metology and automotive mechanics at HCCS Northeast College. The entire student body of Holland Middle School took career awareness field trips and attended lectures by motivational guest speakers regarding career choices and post-secondary training.

The entire student bodies of the six elementary schools in the Furr vertical team participated in activities including career awareness field trips, guest speakers, career days, and assemblies. During the 1996–97 school year, these students also visited Port Houston Elementary School, a HISD Magnet School for International Trade for career awareness.

STWUOP has just completed its second year and will be completely phased in by the end of the 1997–98 school year. During which the number of students involved in work-based learning is planned to eventually reach more than 500 high school participants and over 5,500 elementary and middle school participants.

Business/Community Involvement

STWUOP is the result of planning efforts of a broad coalition of entities that represent those stakeholders most directly affected by the design and results of the community's educational services delivery system. This included the community's public secondary and post-secondary educational institutions, parent and teacher organizations, students, employers, labor organizations, private remedial/vocational education service providers, assorted non-profit organizations, and governmental entities.

The Port of Houston Authority, Stewart & Stevenson, and Continental Airlines, Inc., three of the largest employers in Houston, provided valuable employer leadership in the development of the school-to-work grant and STWUOP program. They contributed the perspective necessary to reform and improve the community's educational system by providing practical insight and experience.

The targeted area's close proximity to Houston port facilities, its extensive Hispanic heritage, and expanding opportunities in international trade and commerce were the catalysts that drive these educational reform efforts. Special emphasis was placed on developing a broader range of career paths for entry into those businesses that serve international markets and seek to hire bi-/multi-lingual employees.

The administrative resources and many of the "connecting activities" for STWUOP are provided by HCCS Northeast in whose district the targeted geographic area is situated. In addition to providing valuable resources, they function as a "third-party broker" between the other cooperating institutions.

Also, stakeholders from the business and educational communities are provided the opportunity to be involved in experiential School-to-Work activities through membership on the program's Advisory Board. This process allows individuals to influence the education process, generally, and the STWUOP, specifically.

Long Range Program Outcome Objectives

The long range program outcome objectives for the implementation of the local STWUOP are as follows:

- Approximately 5,200 targeted area students will be served with school-based, Career-Awareness learning.
- Approximately 500 targeted area high school students will be served with work-based learning experience.
- Approximately 200 targeted area middle school students will be served with work-based, learning experiences. These activities will include a variety of to-be-developed experiences, such as internships, job shadowing, and specialized field trips.
- Approximately 5,200 targeted area students will be served with an average of nine Career-Awareness field trips apiece during the academic year.
- With no appreciable increase in the community's population, Furr High School will confer more than 100 additional diplomas per year compared with the base period, the 1993–94 academic year.
- More than 150 new targeted area, high school graduates will elect to matriculate into the program's post–secondary education portion.
- More than 100 targeted area graduates will receive upon completion of this school-to-work program either an Associate Degree or a Skill Certificate.
- Furr High School graduation rates will be 90% or greater.

Initial National Evaluation Findings

While the finding from the first year evaluation of STWUOP supplies a accounting of School-to-Work locally, it does not provide a global picture of School-to-Work successes. The following are some of the initial findings from the National School-to-Work evaluation.

- For the 11 States with complete data on schools, 210 partnerships reported that about a half million students, representing 1,800 schools, are engaged in school-to-work systems that offer curriculum that integrates academic and vocational learning, provides work-based learning experiences connected to classroom activities, and enhances linkages between secondary and post-secondary education.
- These partnerships also reported participation by 135,000 businesses. These employers provided more than 39,000 work-based learning sites and nearly 53,000 slots for students.
- In the second year after the School-to-Work Opportunities Act became law, data from 17 States showed that $1 in other public and private funds was spent on school-to-work for every $2 in Federal investment — in addition to in-kind support and redirected resources.
- Organizationally, States are divided between those that have created special entities with primary policy-making responsibility for school-to-work, and those in which the board, council, or commission responsible for school-to-work also oversees other general workforce or human resource development policies. System leaders are appointed by State Education agencies in 11 of the 27 States, with the others chosen by the Governor or an interagency commission.
- Federal funds have gone to 818 local partnerships, through State implementation grants or directly from the Federal government. Financial responsibility for local partnership grants is being assumed at the local level by entities ranging from school districts and community colleges to private industry councils. Several States have not yet awarded funds locally, and several others intend to make additional awards.
- States are using their Federal investment to create a school-to-work infrastructure, and, later, to support sub-state partnerships, technical assistance, curriculum development, and other activities.
- State school-to-work directors say that their biggest challenges include poor understanding of key school-to-work principles among some stakeholder groups, and difficulty creating and sustaining collaboration among various public and private entities. Nonetheless, they also report that striking progress has been made in building State-level interagency collaboration, forming local partnerships, and getting employers involved in local partnerships.

First Year Evaluation Findings

The purpose of the first year evaluation was to provide a descriptive and process assessment of STWUOP implemented during 1995. Specifically, the evaluation report was designed to supply program staff with specific feedback, document the implementation of the program during its first year, assess the needs of the various stakeholders, and to supply recommendations that will facilitate the continuing implementation of the program. The following finding were taken from the first year STWUOP evaluation report.

- The demographic analysis of the students served by the program indicated that a diverse student population is enrolled in participating HISD schools. Globally, STWUOP served a population of students who are predominately of minority descent and from low socio-economic backgrounds.
- Analysis of STWUOP's implementation process found that program objectives have been integrated into the daily routine of participating schools, program activities have been initiated, partnerships with local businesses and industry have been formed, some of the materials describing the program have been developed and disseminated, and most of the program's short term objectives were realized. The program staff failed to produce a strategic plan that could be used to guide the implementation process.
- The comparison of the STWUOP curriculum and education activities with the existing HISD curriculum indicated congruency in scope and philosophy. Specifically, both STWUOP and Furr High School are committed to providing students with coursework, training and opportunities that will facilitate the transition from public education to the world of work.
- Teacher, student, and employer perceptions, as recorded by a battery of surveys, reflected the need for a School-to-Work program. The majority of respondents believed that most of the components of a school-to-work included in the surveys were of at least moderate importance to such a program. Specifically, more than half of the teachers surveyed believed that a school-to-work

program would be extremely valuable to their students.

Funding Source and Program Cost

The total estimated budget for the 1996–97 school year for STWUOP encompassing all direct and indirect costs were $445,380, a decrease of $148,727 from the first year of the grant. This budget includes: $142,817 in personnel, an increase of $6,817; $35,989 for benefits; $4,140 for travel and per diem; $51,700 for student enrichment; $48,000 for supplies; $85,136 for Career Investigation Teachers' salaries; and, $77,598 for other costs.

Purpose of the Evaluation Report

The purpose of this report was to build on the evaluation process from first year of the program and to act as a preliminary or intermediate report for the summative third year report. According to the original STWUOP grant a complete evaluation for the second year of the program was not required, so while this report represents a full evaluation it can also be used as the basis of the summative third year report. This evaluation was designed to assess four specific areas of the STWUOP: Student demographics; student and teacher perceptions; stakeholder involvement; and, program effectiveness. The following research questions were addressed by this evaluation:

1. What were the demographics of the schools and students who are served by the School-to-Work Urban Opportunities Program?
2. What were the student and teacher perceptions of what should be included in a School-to-Work program?
3. How did the School-to-Work Urban Opportunities Program involve stakeholders representing community, industry, and labor in the program?
4. What was accomplished by the School-to-Work Urban Opportunities Program Advisory Board during the second year of the program?
5. What were the results from the assessment of student performance and accountability measures?
6. What were the employers' perceptions of Furr High School students who participated in Career Preparation activities?
7. What was the level of implementation of the School-to-Work Urban Opportunities Program at Furr High School vertical team elementary schools?

Review of Literature

School-to-Work Opportunities Act of 1994

On May 4, 1994, President Bill Clinton signed the School-to-Work Opportunities Act. This law provides seed money to states and local partnerships of business, labor, government, education, and community organizations to develop school-to-work systems. This law does not create a new program. It allows states and their partners to bring together efforts at education reform, worker preparation, and economic development to create a system to prepare youth for the high wage, high skill careers of today's and tomorrow's global work place.

The goal of the School-to-Work Opportunities Act of 1994 was to give every student the opportunity to participate in a program that provided a clear pathway to a career. The federal government hoped to accomplish this by making relatively small, temporary investments to encourage states and local education agencies to form partnerships with business and labor. These local partnerships were encouraged to find sources of funding to continue their school-to-work systems after federal school-to-work grants end (Hudelson, 1994).

In the development of the School-to-Work Opportunities Act, Congress (103rd Congress of the United States of America, 1994) made the following observations:

- Three-fourths of high school students in the United States enter the workforce without baccalaureate degrees, and many do not possess the academic and entry-level occupational skills necessary to succeed in the changing United States workplace;
- A substantial number of youths in the United States, especially disadvantaged students, students of diverse racial, ethnic, and cultural backgrounds, and students with disabilities, do not complete high school;
- The workplace in the United States is changing in response to heightened international competition and new technologies and such forces, which are ultimately beneficial to the Nation, are shrinking the demand for and undermining the earning power of unskilled labor;
- The work-based learning approach, which is modeled after the time-honored apprenticeship concept, integrates theoretical instruction with structured on-the-job training, and this approach, com-

bined with school-based learning, can be very effective in engaging student interest, enhancing skill acquisition, developing work attitudes, and preparing youths for high-skill, high-wage careers;

- While many students in the United States have part-time jobs, there is infrequent linkage between such jobs and the career planning or exploration, and/or the school-based learning of such students; and
- In 1992 approximately 3,400,000 individuals in the United States ages 16 through 24 had not completed high school and were not currently enrolled in school, a number representing approximately 11 percent of all individuals in this age group, which indicates that these young persons are particularly unprepared for the demands of a 21st century workforce.

In the development of the School-to-Work Opportunities Act, Congress (1994) states its purposes. These are quoted below:

- To establish a national framework within which all States can create statewide School-to-Work opportunities systems that are a part of comprehensive education reform, and, are integrated with the systems developed under the Goals 2000: Educate America Act and the National Skill Standards Act of 1994; and, offer opportunities for all students to participate in a performance-based education and training program that will enable the students to earn portable credentials; prepare these student for first jobs in high-skill, high-wage careers; and increase their opportunities for further education, including education in a four-year college or university;
- To facilitate the creation of a universal, high-quality school-to-school transition system that enables youths in the United States to identify and navigate paths to productive and progressively more rewarding roles in the work place;
- To promote the formation of local partnerships that are dedicated to linking the worlds of school and work among secondary schools and post-secondary educational institutions, private and public employers, labor organizations, government, community-based organizations, parents, students, state educational agencies, local educational agencies, and training and human service agencies;
- To promote the formation of local partnerships between elementary schools and secondary schools and local businesses as an investment in future workplace productivity and competitiveness;
- To build on and advance a range of promising school-to-work activities, such as tech-prep education, career academies, school-to-apprenticeship programs, cooperative education, youth apprenticeship, school-sponsored enterprises, business-education contracts, and promising strategies that assist school dropouts, that can be developed into programs funded under this act;
- To motivate all youths, including low-achieving youths, school dropouts, and youths with disabilities, to stay in or return to school or a classroom setting and strive to succeed, by providing enriched learning experiences and assistance in obtaining good jobs and continuing their education in post-secondary educational institutions; and,
- To expose students to a broad array of career opportunities, and facilitate the selection of career majors, based on individuals' interests, goals, strengths, and abilities.

In summary, the School-to-Work Opportunities Act was intended to be managed jointly by the Secretary of Labor and the Secretary of Education. A flexible partnership was envisioned that would include these two federal agencies as well as local and state agencies. This partnership was designed to allow school-to-work programs to capitalize upon the capacities already existing at the state and local level and to avoid duplication in educational and training programs for young people. Such an approach was intended to encourage the effective and efficient use of resources as well as flexibility and accountability in meeting program goals.

SCANS Report

The *SCANS (Secretary of Labor's Commission on Achieving Necessary Skills) 2000 Report* (1991) supplied the empirical basis for the development of many school-to-work programs. This report provided a description of the important competencies and skills necessary for the transition from school to the world of work. The *SCANS 2000 Report* resulted from a comprehensive study of workplace competencies and the foundation skills required for effective job performance.

The purpose of the study was to define the skills necessary for employment, propose acceptable levels of workplace proficiency, and develop dissemination strategies for the nation's schools, businesses, and homes. Specifically, the study was designed to provide a description of job-related competencies and skills and to supply educators with information that will facilitate linking the educational process to the real world.

The results of the *SCANS 2000 Report* included an identification and description of five work-place competencies and a three-part foundation of skills and personality characteristics which comprise positive job performance. The following competencies were identified in the report: resources, interpersonal, information, systems, and technology. The areas included in the three-part foundation section of the report were basic skills (e.g., reading, writing), thinking skills (e.g., creativity, decision making, reasoning), and personal qualities (e.g., responsibility, self-esteem).

Basic Skills:

- Reading—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
- Writing—communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
- Arithmetic/Mathematics—performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
- Listening—receives, attends to, interprets, and responds to verbal messages and other cues.
- Speaking—organizes ideas and communicates orally.

Thinking Skills:

- Creative Thinking—generates new ideas.
- Decision Making—specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
- Problem Solving—recognizes problems and devises and implements plan of action.
- Seeing Things in the Mind's Eye—organizes, and processes symbols, pictures, graphs, objects, and other information.
- Knowing How to Learn—uses efficient learning techniques to acquire and apply new knowledge and skills.
- Reasoning—discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

Personal Qualities:

- Responsibility—exerts a high level of effort and perseveres towards goal attainment.
- Self-Esteem—believes in own self-worth and maintains a positive view of self.
- Sociability—demonstrates understanding, friendliness, adaptability, empathy.
- Self-Management—assesses self accurately, sets personal goals, monitors progress, and exhibits self-control.
- Integrity/Honesty—chooses ethical courses of action.

Methods

Participants

School-to-Work Urban Opportunities Program staff members, the School-to-Work Urban Opportunities Program Advisory Board, HISD personnel, and HCCS personnel associated with the program provided information regarding the program description, the implementation of the program, program materials, and program related activities.

The enrollment of participating HISD schools was examined in this evaluation. The program participants included all HISD students, grades PK–12, in the Furr High School vertical team. The vertical teams found in HISD are constructed in a fashion similar to school feeder patterns and are based on the geographic location of the schools. This vertical team is composed of Furr High School, Edison and Holland Middle Schools, and Clinton Park, De Zavala, R.P. Harris, Oates, Pleasantville, Port Houston, and Whittier Elementary Schools. These school are located in the ship channel area of the city of Houston and are part of HISD's East Management District. All of the schools in the Furr High School vertical team are part of the School-to-Work Urban Opportunities Program, with the exception of Edison Middle School which declined to participate.

In order to adequately assess the perceptions of the stakeholders, and the level of program implementation, several participant groups were surveyed during the evaluation process. The following groups were included as participants in the second year of this program evaluation: sixth, seventh and eight grade students enrolled at Holland Middle School as

of September, 1996 and teachers employed at Holland Middle School as of September, 1996. Furr High School vertical team elementary school campuses acted as participants and were assessed through an observation process. Other participants included Houston employers and businesses who assessed Furr High School students who were involved in career preparation activities in the Summer of 1996, as well as the Furr High School students.

Evaluation Design and Data Collection

A multimodal evaluation model was utilized in order to chronicle the implementation of the STWUOP, as well as to supply stakeholders with important information about the program and its participants. This evaluation was also designed to commence the process of a summative evaluation that is scheduled to be completed by the end of the third year of the grant cycle (1997–98). The information collected for this second year evaluation included descriptive data, indicators of involvement, participants' perceptions, and indicators of effectiveness. The following areas were selected as the criteria for this second year evaluation design: student demographics, participants' perceptions of school-to-work programs, stakeholder involvement, and the effectiveness of program activities (see **Table 1**). It is from these evaluation areas that the specific research questions for this evaluation were drawn.

Student Demographics

Information pertaining to the student participants was collected from the 1995–96 Academic Excellence Indicator System (AEIS) report (Texas Education Agency, 1995; 1996). The demographic information collected in this evaluation addressed three relevant descriptive facets of student enrollment. The first facet explored student group membership by ethnicity. The second aspect examined enrollment by environmental and familial factors: mobility, socioeconomic status, and English proficiency status. The third area included program enrollment figures for Special Education, Career and Technology Education, Bilingual/English as a Second Language Education (ESL), and Gifted and Talented Education. These demographic data were displayed by school for each of the participating schools in the Furr High School vertical team.

Participant Perceptions

A battery of two surveys that was developed for the initial formative evaluation (1995–96) was used in this evaluation in order to provide a further assessment of the perception of the participants. These surveys were constructed for two participant group included in this section of the evaluation: students and teachers. The *SCANS 2000 Report* (1991) supplied the theoretical basis for the generation of survey constructs and item content. Specifically, the

Table 1: Evaluation Design for the School-to-Work Urban Opportunities Program

Areas of Evaluation	Information Sources	Data Analysis
Student Demographics	Academic Excellence Indicator System: 1996	Descriptive statistical methods
Stakeholder Involvement	Program information and publications, Advisory Board minutes and information	Qualitative analysis, descriptive reporting, and quasi-ethnographic evaluation
Student and Teacher Perceptions	Middle school teacher and student surveys	Descriptive statistical methods, inductive data analysis, and qualitative response categorization
Effectiveness of Program Activities	School student achievement and accountability data, structured evaluator observations, and SCANS evaluations	Descriptive statistical methods, quantitative comparative analysis, qualitative response categorization

descriptions of job-related competencies and fundamental work skills found in the SCANS report were used by the evaluators in the development of the surveys. Middle school students (from grades six, seven, and eight) and middle school teachers were asked to rate the importance of the inclusion of specific SCANS competencies and skills training in a school-to-work program. This information was used to supplement the high school level teacher and student data collected and reported during the first year of the grant cycle.

The surveys employed a four point likert scale: the four possible ratings were '1' for "not important," '2' for "somewhat important," '3' for "moderately important," and '4' for "extremely important." Copies of the surveys are included in **Appendices A and B**. These surveys also asked participants to identify other areas of training that should be included in a school-to-work program. Teachers also rated the value of a school-to-work program for their students. The utilization of the SCANS 2000 Report as the theoretical basis for the development of the surveys ensured an acceptable level of construct and content validity in these measures.

Stakeholder Involvement

The second area investigated in this evaluation focused on an accounting of the involvement of stakeholders (e.g. business, industry, labor and education representatives) in the School-to-Work Urban Opportunities Program. Interviews, existing program reports and documentation, School-to-Work publications, and quasi-ethnographic observations were used to compile data pertaining to stakeholder involvement. This area was assessed in terms of three criteria. Data were collected in order to (1) present a description of stakeholder participation activities, (2) identify the characteristics of the School-to-Work Urban Opportunities Program Advisory Board, and (3) chronicle the major accomplishments of the School-to-Work Urban Opportunities Program Advisory Board.

Effectiveness of Program Activities

Three criteria were identified as a means of assessing the effectiveness and outcomes of the School-to-Work Urban Opportunities Program. This set of criteria included (1) student performance and accountability data, (2) SCANS evaluations of Furr High School Students involved in Career Preparation activities, and (3) elementary school level implementation data.

Student performance and accountability data was collected at the individual school level for all participating Furr High School vertical team campuses. This data was collected from the 1994–95 through 1996–97 HISD Texas Academic Achievement System (TAAS) reports, HISD and Texas accountability reports, and from the AEIS reports.

An evaluation measure based on the perceptual SCANS surveys (see **Appendices A & B**) used to assess the perceptions of teachers and students was developed to evaluate Furr High School Students who participated in career preparation activities during the Summer of 1996. Businesses and employers who hosted these students in their career preparation activities were asked to rate these students in terms of 16 employee characteristics based on SCANS constructs and School-to-Work curricula. The evaluation measure was designed on a four point likert scale: the four possible ratings were '1' for "not exhibited," '2' for "somewhat exhibited," '3' for "moderately exhibited," and '4' for "completely exhibited." A copy of this measure is included in **Appendix C.**

Observational methods were developed to determine the extent and effectiveness of the implementation of the STWUOP at the elementary school level. This structured observational method was based on the HISD Initiative Assessment model and the National School-to-Work Progress Measures Chart. Ostensibly, this process had two functions. First, it was employed in order to start the development of a structured observation assessment tool that could be used during the third year summative evaluation for site visits to all Furr High School vertical team elementary schools. This assessment tool could be used to identify the specific School-to-Work activities implemented and impact of these activities. Second, this process was used to provide a preliminary snapshot of the level of implementation at the elementary school level.

Data Analysis

Each of the program evaluation criteria were assessed through the application of data analysis designs and methods. Specifically, both quantitative and qualitative analysis methods were employed to evaluate the program in terms of student demographics, stakeholder involvement, participants' perceptions of the school-to-work programs, and the effectiveness of program activities.

Student Demographics

Descriptive statistical methods were employed to analyze the student demographics. Specifically, these data were quantitatively examined in terms of the percentage of enrollment by each demographic variable for each participating school. Specific demographics for students were presented in terms of student ethnicity, environmental and familial factors, and educational program membership.

Participant Perceptions

The perceptions of participants about school-to-work programs were analyzed utilizing both quantitative and qualitative methods. Descriptive statistical methods were applied to the likert scale data from the surveys to produce item response data based on the rating scale used by the surveys. The responses to each likert item were tabulated and presented in terms of number of respondents and percentage of respondents by likert scale score. Mean likert scale scores by item were also produced by this analysis. The results from this quantitative likert scale data analysis were also assessed through thematic methods. These methods included the qualitative categorization of likert items and the calculation of median percentages of responses to items within thematic categories. This analysis was designed to aid the stakeholders in conceptualizing the likert scale results from the surveys.

Qualitative analysis was further employed to examine the participants' suggestions about the program and summarize these results through inductive analysis and response categorization. In other words, both likert scale score results and participant suggestions were grouped based on similarity of survey item content and participant responses. The following categories were employed by this analysis as thematic constructs: career exploration and decision-making, hands-on work experience, and skills training. These methods were employed in order to provide program staff with detailed feedback and an organized listing of participants' perceptions and needs as recorded on the surveys.

Stakeholder Involvement

Descriptive, qualitative, and quasi-ethnographic analysis methods were applied to the stakeholder involvement information gathered from the program. Through these methods, stakeholder activities were described, STWUOP Advisory Board characteristics were identified, and the major accomplishments of the STWUOP Advisory Board were chronicled. All of these data were presented in a narrative format.

Effectiveness of Program Activities

Data pertaining to the effectiveness of program activities were summarized through the application of descriptive and comparative quantitative statistical methods. Expressly, 1996–97 student performance and accountability data were compared to baseline information, at the individual school level.

The ratings of Furr High School students participating in career preparation activities were analyzed by descriptive statistical methods. This analysis was applied to the likert scale data from the evaluation form to produce item response data based on the rating scale used by the form. The responses to each likert item were tabulated and presented in terms of the number of respondents and percentage of respondents by likert scale score. These data were also analyzed by converting the likert scores into mean likert scores. The results from this quantitative likert scale data analysis were also assessed through thematic methods, similar to the methods used to analyze teacher and student perceptions.

Results

Student Demographics:
What were the demographics of the schools and students who are served by the School-to-Work Urban Opportunities Program?

Demographic data were collected and analyzed for all of the HISD students involved in the program. **Table 2** describes the percentages of student enrollment by ethnicity for Furr High School and for all the participating schools in the Furr High School vertical team for the 1996–97 school year. As can be seen in this table, most of the elementary schools were predominately African American or predominately Hispanic. Of the elementary schools, R. P. Harris and Oates had the most racially diverse student bodies. The composition of these school enrollments were 36.4% African American, 58.9% Hispanic, and 4.1% White and 21.8% African American, 67.5% Hispanic, and 10.1% White, respectively. Holland Middle School was ethnically diverse with an enrollment composition of 41.9% African American, 50.6% Hispanic, and 6.3% White. Furr High School had an enrollment of

Table 2: Percentage of Student Enrollment by Ethnicity: 1996–97

	African American	Hispanic	White	Asian/Pac. Islander	Native American
Elementary Schools					
Clinton Park	97.4	2.7	0.0	0.0	0.0
R. P. Harris	36.4	58.9	4.1	0.4	0.2
Oates	21.8	67.5	10.1	0.6	0.0
Pleasantville	89.6	7.1	2.1	1.2	0.0
Port Houston	0.9	95.1	3.7	0.3	0.0
Whittier	7.3	80.2	12.5	0.0	0.0
Middle School					
Holland	41.9	50.6	6.3	1.1	0.1
High School					
Furr	21.3	72.9	4.4	1.4	0.0

21.3% African American, 72.9% Hispanic, and 4.4% White. The highest percentage of Asian/Pacific Islander enrollment in the Furr High School vertical team was 1.4% at Furr High School.

The percentages of 1996–97 student enrollment by Mobility, Economically Disadvantaged, and Limited English Proficient (LEP) are presented in **Table 3**.

Table 3: Percentage of Student Enrollment by Mobility, Economically Disadvantaged, and Limited English Proficient: 1996–97

	Mobility	Econ. Dis.	LEP
Elementary Schools			
Clinton Park	28.8	84.5	0.8
R. P. Harris	30.1	93.4	39.2
Oates	31.7	81.9	31.1
Pleasantville	23.3	63.2	1.2
Port Houston	25.1	94.6	68.1
Whittier	23.2	78.8	39.7
Middle Schools			
Holland	36.3	69.0	16.1
High School			
Furr	65.7	33.3	22.6

The mobility rates for the elementary schools ranged from a low of 23.2% at Whittier Elementary School, to 31.7% at Oates Elementary School. Holland Middle School had a 36.3% mobility rate. The mobility rate for Furr High School was 65.7% for the 1996–97 school year.

Students were identified as economically disadvantaged by their eligibility for federal free and reduced price meal programs. Over half of the student body of all the elementary schools and the middle school were identified as economically disadvantaged. Port Houston Elementary School had the highest percentage of economically disadvantaged students with 94.6%. Holland Middle School had a 69.0% economically disadvantaged rate. At Furr High School, 33.3% of the students were classified as economically disadvantaged. However, the identification of economically disadvantaged students at the high school level is typically under counted due to the large number of eligible secondary students who do not apply for or participate in free and reduced price meal programs.

There was a substantial range in the percentages of LEP students in the Furr High School vertical team elementary schools: Clinton Park Elementary had 0.8% of its students identified as LEP, whereas Port Houston Elementary had 68.1% of its students identified as LEP. Holland Middle School had a 16.1% enrollment of students classified as LEP. Of the

Table 4: Percentage of Student Enrollment by Program: 1996–97

	Special Education	Career & Tech. Education	Bilingual/ESL Education	Gifted & Talented Education
Elementary Schools				
Clinton Park	9.9	0.0	0.0	0.0
R. P. Harris	5.7	0.0	36.1	2.2
Oates	11.2	0.0	29.8	0.0
Pleasantville	12.3	0.0	0.0	20.5
Port Houston	5.0	0.0	59.2	0.0
Whittier	9.6	0.0	35.4	0.0
Middle School				
Holland	15.4	2.2	10.9	10.3
High School				
Furr	11.3	65.4	9.1	0.0

enrollment of students at Furr High School, 22.6% were identified as having limited proficiency in English.

Table 4 lists the percentages of student enrollment in the Furr High School vertical team schools by educational program. The percentages of students in special education programs at the elementary schools ranged from 5.0% at Port Houston Elementary School to 12.3% at Pleasantville Elementary School. Holland Middle School had a 15.4% Special Education enrollment during 1996–97. At Furr High School, 11.3% of the student body was enrolled in Special Education programs.

There currently is no formal career and technological education program offered to HISD elementary school students. Holland Middle School had an enrollment in career and technological education of 2.2% of its total enrollment. Furr High School had 65.4% of its student body enrolled in career and technology education programs.

Two elementary schools, Clinton Park and Pleasantville, had no students enrollment in bilingual and/or English as a Second Language (ESL) programs. Of all the Furr High School vertical team elementary schools, Port Houston Elementary School had the largest percentage enrollment in these programs with 59.2%. Holland Middle School had a 10.9% student enrollment in bilingual/ESL programs. Furr High School had a 9.1% enrollment in these programs.

Three of the schools in the Furr High School vertical team had students enrolled in Gifted and Talented Education programs. R. P. Harris Elementary, Pleasantville Elementary, and Holland Middle had 2.2%, 35.4%, and 10.3% enrollment in gifted and talented programs, respectively.

Student and Teacher Perceptions:
What were the students' and teachers' perceptions of what should be included in a School-to-Work program?

In order to expand the analysis of participant perceptions included in the formative evaluation, a second phase of assessment was completed in the Fall of 1996. Whereas the initial assessment focused on students and teachers from Furr High School, this phase surveyed students and teachers from Holland Middle School. Twenty teachers and 66 Holland Middle School 6th, 7th and 8th graders returned complete STWUOP surveys (16 student surveys were not included because they were incomplete). Both students and teachers where asked to rate 20 program characteristic in terms of how important it is to include each in a School-to-Work program. As previ-

ously described the surveys were designed on a four point likert scale, the four possible ratings were "not important," "somewhat important," "moderately important," and "extremely important." The responses of students and teachers were analyzed both by item and by thematic category (see **Appendices A & B**).

Analysis by Item

In general, teachers tended to give somewhat higher importance ratings to the program characteristics and employee skills listed in the survey than did students. Despite this, almost all items were rated by more than 70% of all students and of all teachers as either "moderately important" or "extremely important." Only one item was rated by less then 70% of both teachers and students as being "moderately important" or "extremely important." This item dealt with work-related bilingual education. The training areas in which most teachers felt students should receive work-related instruction was computer literacy and working with customers in a respectful manner. One hundred percent of the teachers believed that a work-related computer literacy component and the working with customers component is either a "moderately important" or "extremely important" part of a school-to-work program. This compares with 75.8% and 66.7% of the student respondents.

Over 70% of the teachers thought that the following components and activities were "extremely important" aspects of a school-to-work program: "Experiences that aid students in making decisions regarding careers"; "Work site internships during the school year", and "Training in how to resolve conflicts".

Among the student survey respondents, there are four aspects of a school-to-work program that were rated as either "moderately important" or "extremely important" by more than 89% of the participants. Over 92% of the students rated "Specialized field trips that help students become aware of a wide range of different careers" as at least moderately important. Approximately 91% of the students rated Apprenticeship opportunities and "Training in workplace money management" as at least moderately important. Finally, a total of 89.4% of the students ranked "Training that helps students develop good work habits," as at least moderately important. The items that the most students rated as "extremely important" were "Experiences and training in the skills necessary to interview for a job.", "Training in workplace money management", and "Education in leadership skills". Approximately 55% of the students thought that training in these areas was extremely important.

Teachers and students were the most closely matched in their perceptions of the importance of including training that helps students develop good work habits. This aspect was rated as moderately or extremely important by 90.0% of teachers and 89.4% of students. Also, both students and teachers agreed that work-related bilingual education in a school-to-work program was the least necessary of the twenty characteristics. Only 60% of both teachers and students thought that this component was at least moderately important. The component for which teacher and student perceptions were the most incongruent was the "Experiences and training that help students learn how to work with customers in a respectful and helpful manner", with 100% of the teachers perceiving this component as at least moderately important, while only 66.7% of the students view this characteristic as at least moderately important. This disparity was reflected in the data, since almost student group exhibited a great deal of variability in responding to this item.

Analysis by Thematic Categories

Another way to analyze the responses to the School-to-Work Urban Opportunities Students' Survey and the responses to the School-to-Work Urban Opportunities Teachers' Survey is to examine them thematically. The areas addressed by these surveys may be divided into three major categories. These categories are: (1) career exploration and decision-making, (2) gaining hands-on work experience, and (3) skills training. The third category, "skills training," may be subdivided into two areas, job-specific skills and personal and/or motivational skills. The former category includes training in skills that might be included in a job description such as computer and bilingual skills. The latter subdivision refers to training in skills that are more general and/or relational such as "Training that helps students develop good work habits" and "Experiences and training in the skills necessary to interview for a job." These categories were focus-determined and represent valid constructs to use in the process of categorization. **Table 5** presents the median percentages of students and teachers who rated items within each thematic category as "moderately important" and the median percentages of students and teachers who rated

Table 5: Median Percentages of Students' and Teachers' Responses by Category and Overall

Thematic Categories	Students			Teachers		
	Moderately Important	Extremely Important	Mod/Extreme Important	Moderately Important	Extremely Important	Mod/Extreme Important
Career Exploration and Decision-Making	33.3%	40.9%	74.2%	35.0%	57.5%	92.5%
Hands-on Work Experiences	48.5%	27.3%	78.8%	30.0%	55.0%	90.0%
Skills Training: Job-Specific Skills Personal/Motivational	36.4%	42.4%	77.3%	30.0%	55.0%	90.0%
Overall	37.1%	40.9%	78.0%	32.5%	55.0%	90.0%

these items as "extremely important." In addition, Table 5 reports the median percentage of students and teachers who rated items within each category as either "moderately important" or "extremely important."

Career Exploration and Decision-Making

Four items on the School-to-Work Urban Opportunities Students' Survey and on the School-to-Work Urban Opportunities Teachers' Survey were categorized as relating to career exploration and decision-making. These were "Training that helps students discover career opportunities;" "Experiences that aid students in making decisions regarding careers;" "Opportunities to observe the daily activities of a specific job through one-on-one interactions with an employer (Job Shadowing);" and "Specialized field trips that help students become aware of a wide range of different careers." As has already been noted, students tended to use the highest importance response categories less often than did teachers. In this category students tended to rate experiences and training for career exploration and decision-making lower than they rated either hands-on job experiences or job skills training. As can be seen in **Table 5**, the median percentage of students marking these items as "moderately important" or "extremely important" was 74.2%. Teachers gave this training category their high level of importance ratings, 92.5% as "moderately important" or "extremely important." Therefore the greatest incongruence between teachers and students occurred in this thematic category.

Another of the career exploration and decision-making opportunities that was valued particularly by students was "Specialized field trips that help students become aware of a wide range of different careers." A total of 92.4% of student respondents rated such field trips as at least "moderately important." This item had the highest combination of "moderately important" and "extremely important" students ratings in the entire survey. In comparison, only 70.0% of the teachers rated such trips as "moderately important" or "extremely important."

Gaining Hands-on Work Experience

Three items on the School-to-Work Urban Opportunities Students' Survey and on the School-to-Work Urban Opportunities Teachers' Survey were categorized as relating to gaining hands-on work experience. These were "Work site internships during the school year;" "Summer internships at local businesses;" and "Opportunity to learn a career through an apprenticeship." Relative to their other ratings, teachers tended to rank these experiences higher than did students. The median percentage of teachers rating this category of items as either "moderately important" or "extremely important" was 90.0%. Student respondents gave this category, the experiences related to gaining hands-on work experience, the highest median percentages of responses in the upper two response categories (78.8%).

Of the three items related to gaining hands-on work experience, students gave the highest value ratings to the item, "Opportunity to learn a career through an apprenticeship." Of the student respondents, 40.9% rated such an experience as "moderately important" and another 50.0% rated it as "extremely important." The corresponding percentages for teachers were 30.0% and 45.0%, respectively.

The largest incongruence between teachers and students for the items in this category was for "Work site internships during the school year." A total of 48.5% of the students rated this as "moderately important" and 25.8% rated it as "extremely important." For teachers, the corresponding ratings were 20.0% and 70.0%, respectively.

Skills Training

Thirteen items were categorized as being related to students receiving skills training. Five of these items had to do with job-specific skills; eight had to do with personal and/or motivational skills. The experiences pertaining to job-specific skills were "Training that includes work-related computer literacy;" "Work-related bilingual education;" "A vocational program that starts in high school and is continued at a community college;" "Training in workplace money management;" and "Training in how to access, interpret, and communicate information relevant to job tasks." The experiences pertaining to personal and/or motivational skills included, "Training in time management skills;" "Training and practice in using mutual trust, respect and cooperation in the workplace;" "Experiences and training that help students learn how to work with customers in a respectful and helpful manner;" "Education in leadership skills;" "Training in how to resolve conflicts;" "A program that helps students develop self-initiative;" "Training that helps students develop good work habits;" and "Experiences and training in the skills necessary to interview for a job." The Skills Training survey data was presented globally and in terms of these sub-categories: Job-Specific Skills and Personal/Motivational Skills.

Globally, teachers responded more favorably than students to the items in the Skills Training category. The median percent of teachers who rated these items Moderately/Extremely Important was 90.0%, while the median percent of students who responded with the same ratings for this category was 77.3%.

Of all the opportunities related to obtaining job-specific skills, the one that received the greatest percentage of "moderately important" or "extremely important" ratings by students was "Training in workplace money management." A total of 90.9% of students rated such training with one of the two highest response categories. The program component that received the smallest percentage of "moderately important" or "extremely important" ratings was "Work-related bilingual education." A total of 60.6% of the students rated such a program using one of the two highest response categories.

The percentages of teachers rating the items in the job-specific skills category as moderately or extremely important varied greatly. For "Work-related bilingual education," 60.0% of teachers responded using one of the two highest response categories. In contrast, all of the teachers surveyed rated "Training that includes work-related computer literacy" as either moderately or extremely important.

Of the eight items related to personal and/or motivational skills, the educational opportunity that was rated the highest by students was "Experiences and training in the skills necessary to interview for a job." A total of 54.5% believed such experiences to be "extremely important" and 27.3% believed them to be "moderately important." "Training in time management skills" received the smallest percentage of "extremely important" ratings by students. Only 33.3% rated such training as "extremely important." Another 40.9% rated it as "moderately important." "Training in time management skills" also received the smallest percentage of "extremely important" ratings by teachers. A total of 30.0% rated such training as "extremely important." Another 60.0%, however, rated it as "moderately important." The educational opportunity related to personal and/or motivational skills that received the greatest percentage of "extremely important" ratings by teachers was "Experiences and training that help students learn how to work with customers in a respectful and helpful manner." It was rated as "extremely important" or "moderately important" by 100% of the teacher respondents.

Stakeholder Involvement:
How did the School-to-Work Urban Opportunities Program involve stakeholders representing community, industry, and labor in the program?

The School-to-Work Urban Opportunities Program was assessed in terms of its efforts to engage stakeholders, specifically local businesses, in the process of involvement in the program. Expressly, the School-to-Work Urban Opportunities Program procedures, guidelines, and materials were reviewed to determine how this process worked and what specific School-to-Work activities were available to these stakeholders. Toward these ends, data were collected from program information and publications, participation in STWUOP activities, and from quasi-ethnographic

observations during School-to-Work Urban Opportunities Program Advisory Board meetings.

The following techniques used by the program during 1996–97 were identified as effective methods of engaging stakeholders representing community, industry, and labor: genuine communication of the benefits of School-to-Work activities; targeting key employers and industries that match the needs of the program; fostering employer ownership; building local networks of stakeholders; and providing a range of opportunities for involvement.

Genuine Communication of Program Benefits

A key to involving local stakeholders, especially employers was clear and truthful communication about the School-to-Work program. Businesses and employers expressed that they do not appreciate the hard sell, it was more functional to present the program and let the program sell itself. The following program benefits were found to be useful in engaging potential stakeholders.

- Reducing the costs of recruiting, screening, selecting, and training new workers: Schools are the principal supplier of employees for many businesses. When employers work in collaboration with schools, they can reduce their costs. School-to-work systems help employers avoid having to rely on uncertain information and costly methods of recruitment and selection. Employers can obtain evidence of a potential employee's skills and abilities through work-based learning programs, skill certificates, or portfolios of student work. In addition, if employers in school-to-work systems hire students from their own structured work-based learning initiatives, they reduce training costs. There is also evidence that school-to-work can reduce turnover costs for employers.
- Improving the performance of existing employees, particularly worksite supervisors and mentors: The process of developing work-based learning experiences for students can lead worksite supervisors to examine their own activities in the workplace. In the process of determining key workplace learning elements and processes for students, employees may find ways to improve their own performance. Individuals in the workplace who work with students also have an opportunity to develop managerial and supervisory skills.
- Meeting the demand for new skills required by rapid technological change: Many students currently in high school have considerable computer and technology skills because they have grown up working with computers and high-tech electronics. In many instances, they can share this knowledge and experience with current workers.
- Improving community relations: Community involvement is good business practice. Not only do employers receive the satisfaction of interacting with young people and contributing to their educational development in school-to-work initiatives, but they also benefit from an improved local education system and a positive image projected throughout the community.

Targeting Key Employers and Industries

The local School-to-Work Urban Opportunities Program continued to build employer involvement during 1996–97 by targeting businesses and industries in high growth areas, and those that have prior involvement in business and education partnerships or other community-based activities. Other factors that helped in targeting employer recruitment efforts included the extent to which the employers have a record of hiring young people, skill shortages among entry-level workers, cooperative labor-management relations, or a commitment to employee training and diversity. While most area employers were addressed in a recruitment effort, targeting the industry sectors and types of firms most likely to participate is an effective way was used as a recruitment strategy. The visible engagement of these employers served as a springboard for expanding school-to-work to other participating stakeholders. The STWUOP effectively matched stakeholders with the needs of students and the existing school curricula and programs.

Employer Ownership

Employer participation on advisory boards and in developing skill standards, curriculum, and assessment tools provided businesses with a sense of "ownership" in the school-to-work system. School-to-work initiatives provided employers gain an opportunity to help shape education systems and prepare young people for productive futures. Through school-to-work systems, employers were given the opportunity to help identify growth industries and the skills required to fill jobs in them, articulate an education reform agenda that reflects current and future workforce needs, and advocate policies that ensure global

competitiveness. Business involvement in school-to-work ensured that programs are responsive to industry needs, that skill standards are current with high performance workplaces and technology, and that students are able to find jobs in their chosen fields.

Building Local Networks

Developing networks among schools, community organizations, labor, and employers was critical to the success of school-to-work systems. The following is a description of some of the networks that were used as starting points for expanding the School-to-Work Urban Opportunities Program:

- Participating firms: Employers emphasize that they respond more readily to other employers than they do to government officials or educators. Encouraging CEOs or high-level managers to champion school-to-work, both within their own company and with other employers in the community, is a key element of strategies to build employer involvement. Practitioners promote employer networking by encouraging participation on advisory boards, arranging presentations, and providing employers with school-to-work materials for distribution.
- Intermediary organizations: Employer-based intermediary organizations, such as industry associations, chambers of commerce, and professional associations, provide access to large numbers of employers. Intermediary organizations also provide a common pool of resources and services that individual employers--small businesses in particular--may need in order to participate in school-to-work initiatives. Intermediary organizations focus specifically on school-to-work, or they may be local counterparts of national organizations like local chambers of commerce or trade associations. Organizations such as employment service and vocational rehabilitation agencies have a great deal of experience connecting job seekers with employers. Organizations with good track records of working with employers are most likely to be effective, because they have established credibility as well as mutual respect and avenues of communication.
- School-to-work coordinators and employment specialists: The STWUOP use employment specialists (members of the Advisory Committee) to recruit employers and have found them particularly effective in building employer involvement. Experience suggests that an individual acting as a liaison between schools and employers builds collaborative relationships and develops an understanding of the special needs and concerns of employers. By devoting time and resources specifically to recruiting employers, these individuals target employers who otherwise might have been overlooked.
- Students, parents, and school staff: Existing formal and informal relationships provide a foundation for building a school-to-work system. The personal relationships and contacts of students, parents, and school staff are an effective means to build a sense of partnership and common goals throughout the community.

Opportunities for Involvement

Employers consistently reported that a wide range of well-defined roles and responsibilities encourage participation (see, **Table 6**). Successful school-to-work systems do not attempt to channel employers into prescribed activities. Instead, they offered employers a continuum of choices, ranging from career awareness, career exploration, and job shadowing, to more intensive activities such as mentoring, apprenticeships, and other structured work-based learning opportunities. Employers were also given the opportunity to provide input in the development of integrated curriculum, develop and recognize skill standards, serve on planning and governance bodies, and recruit other employers. The intensity and nature of employer involvement in these activities depended upon the specific resources available in local labor markets and the goals of both the employer and the school-to-work system.

Based on the National Employer Leadership Council (NELC) model, the local School-to-Work Urban Opportunities Program has developed procedures and instituted activities that work toward involving a wide variety of stakeholder, especially from the business community. Descriptive analysis and reporting techniques were used to assess the specific activities available to the School-to-Work Urban Opportunities Program stakeholders. In accordance to the NELC model, activities were categorized in terms of the type of participants benefiting from stakeholder involvement and in terms of the purpose of involvement. A descriptive analysis of involvement activities designed to benefit students is presented in Table 6.

Table 6: Employer/Employee Involvement Activities Designed to Benefit Students

Activities	Description	Purpose
Career Talks	Employers and employees visit students in the classroom and explain the work in their industry or company.	Career Awareness
Career Days	Special events are typically held to allow students to meet with post-secondary educators, employers and employees, or human resource professionals to learn about education and work opportunities. Career day activities are designed to help students think about their interest and abilities in relation to potential careers.	Career Awareness
STW Field trips	Field trips that meet he standards of STW programs and allow students to visit worksites, talk with employees and observe workplace activities.	Career Awareness
Job Shadowing	A student follows an employee at a company location to learn about a particular occupation or industry. Job shadowing can help students explore a range of career objectives and select a career major for the latter part of high school.	Career Exploration
Job Rotations	At a worksite, students transfer among a number of positions and tasks that require different skills and responsibilities in order to understand the steps that go into creating a product and/or service; how their own effort affects the quality and efficiency of production and customer service; and how each part of the organization contributes to productivity.	Career Exploration
Internships	Students work for an employer for a specified period of time to learn about a particular industry or occupation. Students' workplace activities may include special projects, a sample of tasks from different jobs, or tasks from a single occupation. These may or may not include financial compensation.	Career Preparation
Cooperative Education	Students alternate or coordinate their high school or post-secondary studies with a job in a field related to their academic or occupational objectives. Students and participating businesses develop written training and evaluation plans to guide instruction, and students receive course credit for both their classroom and work experiences. Credit hours and intensity of placements often vary with the course of study.	Career Preparation
Mentoring	Employee(s) who possess the skills and knowledge to be mastered by a student, and who instructs the student, critiques the performance of the student, challenges the student to perform well, and works in consultation with teachers or youth organizations and the employer of the student.	Career Preparation

These activities were designed to serve students by facilitating career awareness, career exploration or career preparation. Career awareness activities were generally implemented at the elementary school level and were designed to make students aware of the unlimited broad range of careers and/or occupations in the world of work. Career exploration activities were generally implemented at the middle school level and were designed to provide some enriched exposure to career options for students. Career preparation activities were generally implemented at the high school level (usually during the Junior and Senior Years) and were designed to provide experiential training in a specific field or occupation.

In addition to student centered activities, the local School-to-Work Urban Opportunities Program implemented activities that involve employees/employers, which were designed to directly benefit schools and their teachers. A descriptive analysis of these involvement activities is presented in **Table 7**. Most of these opportunities were available to stakeholders through the School-to-Work Urban Opportunities Program Advisory Board. The establishment of this board was a major accomplishment and will be discussed under the next research question.

What was accomplished by the School-to-Work Urban Opportunities Program Advisory Board during the second year of the program?

The first major accomplishment of the Advisory Board was to establish itself as an official and functioning entity in the School-to-Work Urban Opportunities Program. During most of the first year of the grant cycle the Advisory Board was purely ceremonial. During the second year of the grant cycle the Advisory Board has worked to fulfill its purpose.

One of the first accomplishments of the School-to-Work Urban Opportunities Program Advisory Board was to develop a set of by-laws to define the purpose of the Advisory Board and provide guidelines for its actions. The stated purpose of the Advisory Board is

Table 7: Employer/Employee Involvement Activities Designed to Benefit Schools and Teachers

Activities	Description
Curriculum Development	Work with educators at the national and state level to integrate curriculum to link academic and workplace knowledge and skills; to logically connect work with educators at the regional and local levels to develop work-based learning curriculum such as Tech-Prep.
Instructional Materials	Work with educators at the national and state levels to develop compatible inexpensive products, services and software to support the teaching of workplace and industry skills and knowledge.
Business Practice Advisement	Provide information and support to counselors and teachers on current industry practices.
Industry Skill Standards	Give copies of your industry skill standards to secondary and post-secondary educators for use in their program planning. Connect educators to industry skill standards implementation projects that integrate skill standards, academic standards, and workplace experience.
Technology	Provide educators with information and support to increase their awareness and skill development of current technology. Provide access to technology.

to represent program membership in providing governance for the program efforts to achieve its goal of providing the participants with an improved educational system and the motivation to use it in order to help themselves acquire the skills and knowledge they need to succeed in the workplace and fully participate in society. Additionally, this improved educational system must be configured to include the basic elements of a School-to-Work system so that it can serve as a demonstration project for the state and national systems. The Advisory Board was designed to work with program personnel and Ex-Officio Technical Advisors to supervise the development, design, and implementation of school-based learning activities, work-based learning activities, and connecting activities.

The membership of the School-to-Work Urban Opportunities Program Advisory Board was developed to represent the full range of possible stakeholders (see **Table 8**). An analysis of the Advisory Board membership indicated that at the beginning of the 1996–97 school year there were 27 members that represented six stakeholder categories: educational institutions; labor organizations; industry and busi-

Table 8: The Composition of the Membership of the School-to-Work Urban Opportunities Program Advisory Board by Category

Advisory Board Member Categories	Company, Agency, or Institution	Number of Members
Educational Institutions	HISD, HCC, Gulf Coast Tech Prep STW Partnership, and Region IV Education Center	6
Labor Organizations	Painters Labor Union #130 and AFL-CIO	2
Industry and Business	Anheuser-Busch, Exxon Co. USA, GE Industrial & Power Systems, Brown & Root, BFI Waste Systems, Lyondell Petrochemicals, Solvay Polymers, and Randall's Enterprises	9
State/local Government	Port of Houston Authority, Office of State Senator Rodney Ellis, and the City of Houston	3
Community Representatives	Pleasantville Civic League and Joy Tabernacle	2
Service Industry	Houston International Initiatives, Employment & Training Center, American Productivity & Quality Center, and Community Pride, Inc.	5

ness, state/local government, community representatives; and service industry. Members from educational institutions included HISD employees, private education partnership employees, employees of public education agencies and HCC employees. Members from labor organizations represented different unions. Members from industry and business represented a cross-section of the industrial milieu of East Houston. Members from state/local government represented agencies from a variety of levels. Members from the community represented church and civic groups. Members from the service industries represented companies that provide business training and personnel development services. The specific companies and agencies as well as a count of the number of members from each category is presented in **Table 8**. The largest percentage of the School-to-Work Urban Opportunities Program Advisory Board membership during 1996–97 was from the industry and business category at 33%. The second and third largest membership categories was the education institution and service industry categories at 22% and 19%, respectively.

In order to perform efficiently and effectively in an advisory capacity, the School-to-Work Urban Opportunities Program Advisory Board developed a system of subcommittees. The following subcommittees were instituted during year two of the grant cycle: partnership development, curriculum and staff development, planning and evaluation, funding and resource development, marketing, communications, and student efforts. These subcommittees were given specific advisory responsibilities in regards to the STWUOP.

- Partnership development: to recruit stakeholders to ensure that a variety of agencies, industries, labor, and institutions are represented in the STWUOP because a level of diversity can provide the highest level of opportunities for the program.
- Curriculum and staff development: the purpose of this subcommittee is to develop and implement an integrated model that improves student achievement and can be used as a broad system-wide road map for the future. The goal of this effort is a system that equips students with the skills and knowledge to be successful in today's and tomorrow's increasingly competitive workplace. Key focus areas include alignment of the written curriculum, the taught curriculum, state assessment, and "real world" needs and expectations. It also includes effective integration and implementation of the STWUOP process, implementation of effective staff development, and linkage to the constructs from the SCANS report.
- Planning and evaluation: the purpose of this subcommittee is to develop and implement short term and long term plans that detail the implementation system and process for the complete grant cycle and beyond. To monitor the alignment of STWUOP with its resources, and to oversee the evaluation process.
- Funding and resource development: the purpose of this subcommittee is to establish a short and long term fund-raising plan in order to insure a smooth transition from a solely federally funded program to a primarily community funded program. The committee will also tap into non-financial community resources such as knowledge of the marketplace, in-house training programs, and job shadowing opportunities.
- Marketing: the purpose of this subcommittee is to help establish community involvement , parental involvement, teacher involvement, employer/employee involvement, and student involvement.
- Communications: the purpose of this subcommittee is to aid in the creation and production of School-to-Work related publications, guidelines, and manuals. It is also responsible for publicity and developing community awareness of the School-to-Work goals, objectives and activities.
- Student efforts: the purpose of this subcommittee is to develop, design and oversee mentoring activities, student services, work opportunities, and career preparation activities.

These subcommittees were design to work in concert to provide vision and direction for the School-to-Work Urban Opportunities Program beyond the first federal grant cycle (first five years). So each subcommittee was given domain over the specific processes that will need to be implemented and accomplished in order to reach the goals and objectives of the STWUOP.

Quasi-ethnographic analysis of the School-to-Work Urban Opportunities Program Advisory Board was applied to the experiences at the Advisory Board meetings. The following finding were identified:

- A complete and functional set of rules and by-laws were officially and intuitively developed during the establishment of the Advisory Board as an entity.

- The Advisory Board and the Ex-Officio Technical Advisors (including program staff) developed a working relationship and level of interaction that still requires fine tuning. Specifically, the level of communication was not completely satisfactory; subcommittee meeting schedules were not communicated to all of the Ex-Officio Technical Advisors and this was detrimental to the process.
- The Advisory Board was well-organized and the subcommittees were developed to completely represent all facets of the STWUOP. The Advisory Board was successful in helping the program develop guidelines for Career Awareness, Career Exploration and Career Preparedness activities. However, these subcommittees were only moderately successful in the extent of what they accomplished this year. Also, an accounting of the extent of what was accomplished was not compiled by these subcommittees.
- A trend that was observed during Advisory Board meetings was the development of a power differential between business and industry members and other Advisory Board members. Business and industry members (which represent the largest membership group, see Table 8) seemed to assume the leadership role and set the agenda at a disproportionately high level when compared to other membership groups.
- The alignment of educational constructs with business and industry practices was not implemented in a objective fashion. Expressly, while it is unclear in established educational research whether the application of business models to education has been successful, the Advisory Board worked to introject business methods into the program without extensively considering possible incongruences.

The ultimate goal of the STWUOP Advisory Board is to enable the program to transition from a federally funded program to a non-profit self-sufficient entity. Currently, the Advisory Board provides a vital link between the world of work and the world of education, that allows the board to oversee and support the implementation of school-based learning activities, work-based learning activities, and connecting activities.

Effectiveness of Program Activities

What were the results from the assessment of student performance and accountability measures?

The results of standardized achievement tests can provide the data to determine the impact of the School-to-Work Urban Opportunities Program on participating students' academic performance. TAAS data, for Math, Reading, and Writing were available for all of the Furr High School vertical team campuses that participated in the School-to-Work Urban Opportunities Program. Baseline data from the 1994 were collected and compared to the 1997 TAAS results to determine the level of improvement. The TAAS data were analyzed in terms of the percent of students who took the test and passed the test at each school

Table 9: A Comparison of 1997 TAAS Percent Passing Rates with Baseline (1994) Passing Rates

	Math		Reading		Writing	
Elementary Schools	**1994**	**1997**	**1994**	**1997**	**1994**	**1997**
Clinton Park	38	74	61	84	67	68
R. P. Harris	74	66	74	75	91	74
Oates	56	84	76	84	88	86
Pleasantville	70	81	89	89	100	98
Port Houston	44	63	71	64	86	100
Whittier	43	80	68	78	90	71
Middle Schools						
Holland	37	56	52	72	47	73
High School						
Furr	23	41	44	71	59	77

(percent passing). A summary of these data are presented in **Table 9**. A complete accounting of TAAS scores by grade for each of the participating school is presented in **Appendix D** for 1994, 1995, 1996, and 1997.

The Analysis of the comparison between the percent passing in 1994 on the TAAS and the percent passing in 1997 furnished the following evidence of the program's impact on the academic performance of students. The analysis was performed for the Reading, Math and Writing subtests of the TAAS.

- In terms of student performance on the Mathematics section of the TAAS, seven of the eight schools (88%) exhibited an increase in percent passing from baseline 1994 data to the 1997 TAAS results. Three schools, Whittier, Clinton Park, and Oates elementary schools increased the percent of students passing the Math TAAS from baseline by at least 28%.
- Seven of the eight schools had at least 50% of their students pass the TAAS Math test in 1997. Of these schools, Pleasantville had the highest percentage of students passing at 95%.
- Preliminary quantitative analysis indicated that as a group, Furr High School vertical team schools exhibited a marked increase in their percent passing on the TAAS Math from 1994 to 1997. However only three of the school had percent passing rates above 80% in 1997, Oates Elementary School at 84%, Pleasantville Elementary School at 81%, and Whittier Elementary School at 80%.
- In terms of student performance on the Reading section of the TAAS, six of the eight schools, 75%, exhibited an increase in percent passing from baseline 1994 results to the 1997 results. One of the eight schools, Pleasantville Elementary School reflected no change. Furr High School and Holland Middle School showed the greatest amount of improvement with an increase of percent passing from 44% to 71% and 52% to 72%, respectively.
- Seven of the eight schools had at least 70% of their students pass the TAAS Reading test in 1997. Of these schools, Pleasantville Elementary School, 89%, Clinton Park Elementary School, 84%, and Oates Elementary School, 84%, had the highest percent of students passing.
- In terms of student performance on the Writing section of the TAAS, only four of the eight schools (50%) exhibited an increase in percent passing from baseline 1994 results to the 1997 results. One of the eight schools, Pleasantville reflected no change tangible negative change (from 100% to 98%) since its percent passing rate remained over 90%. Holland Middle School showed the greatest amount of improvement with an increase of percent passing from 47% in 1994 to 73% in 1997, Furr High School achieved the second highest increase from 59% in 1994 to 77% in 1997. Port Houston Elementary School achieved an exemplary augmentation of TAAS Writing performance by increasing the percent of students passing to 100% in 1997 from 86% in 1994.
- All of the schools but one had at least 70% of their students pass the TAAS Writing test in 1997. Of these schools, Port Houston Elementary School, 100%, Pleasantville Elementary School, 98%, and Oates Elementary School, 86%, had the highest percentage of students passing the Writing section of the TAAS.

What were the employers' perceptions of Furr High School students who participated in Career Preparation activities?

Surveys were mailed to employers who participated as hosts for School-to-Work students involved in Career Preparation activities. Employer ratings for 24 of the participating students were returned to the HISD Department of Research and Accountability. As previously described, the survey asked employers to indicate the degree to which sixteen different employee characteristics were present in the School-to-Work students they hosted for Career Preparation activities. Employers rated the characteristics on a four point likert scale that ranged from '1', indicating that the skill or characteristic was " not present", to '4', indicating that the skill or characteristic was "completely present" in participating School-to-Work students. The results from the analysis of employers' responses to the survey are presented in **Appendix C**.

All of the characteristics listed on the survey were rated as being either "moderately present" or "completely present" by at least 50% of all respondents. Five characteristics were perceived as being at least moderately present by over 80% of the employers who participated in this process. These characteristics included, "Exhibits appropriate time management skills" (87.5%), "Is able to do basic record keeping"

(85.0%), "Is able to work toward agreements through compromise" (83.3%), and "Displays good work habits" (83.3%).

The characteristics and skills on the survey that had the highest level of "not present" to "somewhat present" indicate those characteristics and skills that School-to-Work students were less prepared to exhibit during Career Preparation activities. These characteristics and skills included "Exhibits initiative" which 50% of the employers rated as "not present" to "somewhat present" in participating students, the second characteristic or skills was "Is able to select goal-related activities and stay on task", at 37.5%, third was "Works well with people from diverse backgrounds", at 37.5%, and the fourth item was "Exerts a high level of effort and perseveres toward goal attainment", at 37.5%. Three of the four characteristics or skills stated above are motivational characteristics. This indicates a need to focus on the motivation training of students prior to their involvement in Career Preparation activities. While motivational skills need an increased focus, the results of the analysis indicate that the STWUOP program instilled in its students the basic job-specific skills and work habits that employers expect in their employee. These skill and characteristics can be used to further develop the higher level motivation characteristics. An extremely positive result was that School-to-Work students were perceived by employers as having high levels of self-esteem and positive self-worth.

A majority of all of the 16 characteristics and skills included in the survey as items was rated as "moderately present" in the School-to-Work students who were rated by employers. The Median percent for the "moderately present" rating category was 41.7% across all items, for "completely present" the median was 29.2%, for "somewhat present" the median was 16.7%, and for "not present" the median was 10.4%. In other words the global analysis of the STWUOP effectiveness in preparing School-to-Work students to meet the expectations of employers in the Career Preparation activities process was "moderately" successful.

What was the level of implementation of the School-to-Work Urban Opportunities Program at Furr High School vertical team elementary schools?

Extensive site visits were preformed at three of the Furr High School vertical team elementary schools involved in the School-to-Work Urban Opportunities Program. These visits included structure observations of the implementation of the School-to-Work Urban Opportunities Program. Specifically, this process had a dual purpose. First, it was employed in order to develop a School-to-Work observation measure for the elementary school level. It was proposed that this assessment tool would include all facets of the program at that level and be based on the methods developed in the HISD Initiative Assessment model and the National School-to-Work Progress Measures Charts. This measure is in the process of being developed and will be used in the Fall of 1997 to collect data for the third year summative evaluation. Second, this process was used to supply a preliminary snapshot of the extent and effectiveness of the STWUOP implementation during the second year of the grant cycle.

Interviewing techniques, school observations, and classroom observations were used in this process. This process focused on the implementation of school-based learning activities, work-based learning activities, and connecting activities. Also, these observations focused on determining the level of integration of career awareness into the everyday functions at these schools. Following the model developed by the National School-to-Work Evaluation the scale used in this process was a four point scale that range from "no activity", to "limited activity" to "information/presentation" to "integration." In this scale, "information/presentation" was used to represent implementation to the extent that School-to-Work objectives influence the delivery of curriculum. The term "integration" was used to represent complete and systematic effects at the school level. The "no activity" and "limited activity" are intuitively obvious in their representations.

In terms of school-based learning activities the following summary results were found:

- Generally, the schools were between "limited" and "information/presentation" in the process of integrating career awareness into the every day curricula. There was a basic sense of an environment of career awareness in the observed elementary schools.
- There were several career-related bulletin boards in the schools and classrooms that were observed and time was set aside in the school day to address career related topics. However, the use of career related examples in other curricular activities (Math, Reading...) was limited.

- Career days, career talks, and career fairs were all sufficiently implemented at the observed elementary schools during the 1996–97 school year.
- A majority of the skills identified in the SCANS report were addressed. Expressly, basic academic skills, thinking skills, personal qualities, as well as the use of technology through computer literacy classes, were present at the observed elementary schools.
- School-to-Work activities have not been aligned with HISD initiatives or programs. For example, School-to-Work activities would benefit from the methods, instructional techniques, activities, and the content areas found in Project Reconnect (a parental involvement initiative), The Balanced Approach to Reading Initiative, the Curriculum Alignment Initiative, Character Education, and Bilingual Education. Also, the level to which the STWUOP addresses the needs of special populations could not be readily assessed in this process.

In terms of work-based learning activities the following summary results were found:

- Globally, the elementary schools observed were between "information/presentation" and "integration" in terms of the implementation of work-based learning activities designed to further career awareness.
- Each of the observed elementary schools provided its students with more then sufficient opportunities to engage in field lessons, career trips, and workplace tours. The student participation level in these activities was high at each of the elementary schools.
- A majority of the career awareness work-based learning activities implemented by the observed elementary schools were aligned with the Field lessons/Career Trip guidelines developed by the local School-to-Work Urban Opportunities Program. These guidelines stated that only activities that are in keeping with the spirit and framework of the STWUOP grant should be implemented, so only those field lessons that have high skill/high wage jobs on their sites will qualify for STWUOP expenditures. These sites should use some form of high technology such as computers, sophisticated processing systems, chemical refining technology, robotics, mechanical engineering technology, television and radio communication technology, manufacturing technology, high wage government jobs such as police, or HVAC, use of numbers such as accountants or actuaries, medical careers, careers that have an international focus, petrochemical jobs, and any other career that requires high skills and pays a high wage.

In terms of connecting activities the following summary results were found:

- The degree of business partnership involvement at the observed elementary schools was between "information/presentation" and "integration." Volunteerism and parental involvement were at acceptable levels based on HISD averages, but still required an increase focus to align with new HISD standards (Project Reconnect) and STWUOP objectives.
- The system of field lesson opportunities and the pool of individuals available for career talks, career days and career fairs indicated that these elementary schools are well-connected to local businesses and employers through the STWUOP.
- No preservice education activities connecting these STWUOP elementary schools to local colleges and universities was readily observable in this process. Since, HCC is a major component of the STWUOP, this result was unexpected.

Conclusion

This second year evaluation represents a bridge between the implementation of the School-to-Work Urban Opportunities Program and an overall assessment of the effectiveness and impact of the program. Expressly, this evaluation was designed to include formative components from the first year evaluation as well as developing the summative evaluation methods that will be employed in the third year evaluation.

The demographic analysis of the schools served by STWUOP suggest the program continued to serve largely ethnic minority student enrollment during the second year of the grant cycle. Some schools were found to be predominately Hispanic, others to be predominately African American. No more than 13% of the students in any school of the Furr High School vertical team schools were an ethnic majority. The schools in the Furr High School vertical team were also characterized by high rates of mobility, high percentages of economically disadvantaged students,

and, in most of the schools, high rates of LEP-identified students. The results of the demographic analyses confirm the appropriateness of an innovative educational program such as STWUOP since it has already been established that disadvantaged students and students from diverse racial and ethnic backgrounds tend, as groups, to be more prone to dropping out of school and less likely to pursue successful career tracts.

The most certain conclusion that can be drawn from the results of the middle school student and teacher surveys is that these groups value highly the kinds of educational opportunities offered in a school-to-work program. Approximately 70% of all students and of all teachers rated a majority of the program characteristics as "moderately important." It appears that there is a great deal of interest in the offerings of a school-to-work program, at least in theory, by these two important groups of stakeholders. The results of the student and teacher surveys also suggest that these two groups value of particular program components somewhat differently. Compared to their other responses, students most valued hands-on work experiences, whereas teachers most valued educational opportunities having to do with career awareness and exploration for their students. Both teachers and students agreed that the inclusion of bilingual education in a school-to-work program was the least important component.

The results from this evaluation presented the wide range of diverse activities that are available to stakeholders when they become involved in the School-to-Work Urban Opportunities Program. By communicating the possible avenues for involvement, potential stakeholders are given the opportunity to determine their own roles in a school-to-work program. The results from the evaluation also provided a description of the accomplishments of the School-to-Work Urban Opportunities Advisory Board. The development of a representative and well-functioning Advisory Board will guarantee that the STWUOP is to able make the transition from a federally funded program to a non-profit self sufficient entity by the end of the fifth year of the grant cycle. Currently, the Advisory Board provides a vital link between the world of work and the world of education, that allows the board to oversee and support the implementation of school-based learning activities, work-based learning activities, and connecting activities.

Finally, it can be concluded from the program effectiveness criterion that the program has been moderately effective in its implementation, influence of the academic performance of participants, and on the preparation of high school students for interactions with employers. First, an acceptable level of implementation in terms of school-based, work-based and connecting activities was observed at all of the participating elementary schools observed during this evaluation. Second, when compare to baseline 1994 data, the academic performance of students at participating school increased substantially. Finally, the results from the assessment of students involved in Career Preparation activities indicated that employers, generally, found these students to be well prepared in terms of basic work-skills and SCANS characteristics. The one area that a perceived need for improvement was detected was in terms of motivation-related work characteristics.

Recommendations

1. School-to-Work activities should be aligned with HISD initiatives or programs. For example, School-to-Work activities would benefit from the methods, instructional techniques, activities, and the content areas found in Project Reconnect (a parental involvement initiative), The Balanced Approach to Reading Initiative, the Curriculum Alignment Initiative, Character Education, and Bilingual Education.

2. Develop a means to determine the extent to which Special Populations (Special Education, limited English proficient, and at-risk) are being served by the School-to-Work Urban Opportunities Program.

3. Continue to communicate the STWUOP philosophy and goals to the teachers and staff of participant schools. Expand this communication effort to include parents and community members

4. Recruit several parents of students enrolled in Furr High School vertical team schools to be members of the School-to-Work Urban Opportunities Program Advisory Board.

5. Monitor the areas of business and education integration closely in order to ensure that counter productive activities are not implemented. Spe-

cifically, many business practices have not been evaluated sufficiently, therefore these practices should be thoroughly examined before they are infused into the education process.

6. Continue developing curriculum plans that allow students who begin a program at Furr High School to continue at HCCS and beyond. In addition, increase the focus on the motivation training of students prior to their involvement in Career Preparation activities.

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APPENDICES

Appendix A
Student Survey and Student Survey Data

School To Work Urban Opportunities
Students' Survey

The School to Work Urban Opportunities Program (STWUOP) is designed to help you acquire the skills and knowledge needed to succeed in finding meaningful employment and to give you hands on opportunities in the workplace. The program hopes to accomplish these goals through a partnership with businesses in the ship channel area and by providing you with basic training, career awareness and work-based experiences.
In order to help this program address student needs, please complete this survey. It will enable program staff to match program activities to students' interests.

Below are a number of School to Work program characteristics and employee skills that have been identified as being important. Using the Scantron sheet provided you, bubble in the number (1, 2, 3, or 4) that best represents how important to you each item would be in a School to Work program. On the Scantron sheet there are five possible responses. Please ignore the fifth response category. Only complete the "Scantron General Purpose Answer Sheet" section of the Scantron.

	Not Important 1	Somewhat Important 2	Moderately Important 3	Extremely Important 4
1. Training that helps students discover career opportunities.				
2. Experiences that aid students in making decision regarding careers.				
3. Work site internships during the school year.				
4. Summer internships at local businesses.				
5. Opportunities to observe the daily activities of a specific job through one-on-one interactions with an employer (Job Shadowing).				
6. Opportunity to learn a career through an apprenticeship.				
7. Specialized field trips that help students become aware of a wide range of different careers.				
8. Training that includes work-related computer literacy.				
9. Work-related bilingual education.				
10. A vocational program that starts in high school and is continued at a community college.				

Appendix A (cont.)
Student Survey and Student Survey Data

	Not Important 1	Somewhat Important 2	Moderately Important 3	Extremely Important 4
11. Training in time management skills.				
12. Training in workplace money management.				
13. Training and practice in using mutual trust, respect and cooperation in the workplace.				
14. Experiences and training that help students learn how to work with customers in a respectful and helpful manner.				
15. Education in leadership skills.				
16. Training in how to resolve conflicts.				
17. A program that helps students develop self-initiative.				
18. Training in how to access, interpret, and communicate information relevant to job tasks.				
19. Training that helps students develop good work habits.				
20. Experiences and training in the skills necessary to interview for a job.				

What other types of training or activities do you think should be included in a School to Work Program?

Appendix A (cont.)
Student Survey and Student Survey Data

School To Work Urban Opportunities
Students' Survey Results: Counts and Percentages

	Not Important 1		Somewhat Important 2		Moderately Important 3		Extremely Important 4	
	n	%	n	%	n	%	n	%
1. Training that helps students discover career opportunities.	2	3.0	12	18.2	22	33.3	30	45.5
2. Experiences that aid students in making decisions regarding careers.	7	10.6	13	19.7	22	33.3	24	36.4
3. Work site internships during the school year.	4	6.1	13	19.7	32	48.5	17	25.8
4. Summer internships at local businesses.	7	10.6	7	10.6	34	51.5	18	27.3
5. Opportunities to observe the daily activities of a specific job through one-on-one interactions with an employer (Job Shadowing).	8	12.1	12	18.2	22	33.3	24	36.4
6. Opportunity to learn a career through an apprenticeship.	2	3.0	4	6.1	27	40.9	33	50.0
7. Specialized field trips that help students become aware of a wide range of different careers.	1	1.5	4	6.1	26	39.4	35	53.0
8. Training that includes work-related computer literacy.	9	13.6	7	10.6	22	33.3	28	42.4
9. Work-related bilingual education.	14	21.2	12	18.2	31	47.0	9	13.6
10. A vocational program that starts in high school and is continued at a community college.	6	9.1	7	10.6	30	45.5	23	34.8
11. Training in time management skills.	2	3.0	15	22.7	27	40.9	22	33.3
12. Training in workplace money management.	1	1.5	5	7.6	24	36.4	36	54.5
13. Training and practice in using mutual trust, respect and cooperation in the workplace.	4	6.1	14	21.2	20	30.3	28	42.4
14. Experiences and training that help students learn how to work with customers in a respectful and helpful manner.	7	10.6	15	22.7	21	31.8	23	34.8
15. Education in leadership skills.	1	1.5	8	12.1	21	31.8	36	54.5
16. Training in how to resolve conflicts.	4	6.1	11	16.7	25	37.9	26	39.4
17. A program that helps students develop self-initiative.	5	7.6	12	18.2	26	39.4	23	34.8
18. Training in how to access, interpret, and communicate information relevant to job tasks.	4	6.1	10	15.2	21	31.8	31	47.0
19. Training that helps students develop good work habits.	1	1.5	6	9.1	25	37.9	34	51.5
20. Experiences and training in the skills necessary to interview for a job.	1	1.5	11	16.7	18	27.3	36	54.5

Appendix B
Teacher Survey and Teacher Survey Data

School To Work Urban Opportunities
Teachers' Survey

The School to Work Urban Opportunities Program (STWUOP) is designed to help students acquire the skills and knowledge needed to succeed in finding meaningful employment and to give them hands on opportunities in the workplace. The program hopes to accomplish these goals through a partnership with businesses in the ship channel area and by providing students with basic training, career awareness and work-based experiences. Your input would be very helpful to the program as it develops specific plans for the coming months.

Below are a number of School to Work program characteristics and employee skills that have been identified as being important. Using the Scantron sheet provided you, bubble in the number (1, 2, 3, or 4) that best represents how important to you each item would be in a School to Work program. On the Scantron sheet there are five possible responses. Please ignore the fifth response category. Only complete the "Scantron General Purpose Answer Sheet" section of the Scantron.

	Not Important 1	Somewhat Important 2	Moderately Important 3	Extremely Important 4
1. Training that helps students discover career opportunities.				
2. Experiences that aid students in making decision regarding careers.				
3. Work site internships during the school year.				
4. Summer internships at local businesses.				
5. Opportunities to observe the daily activities of a specific job through one-on-one interactions with an employer (Job Shadowing).				
6. Opportunity to learn a career through an apprenticeship.				
7. Specialized field trips that help students become aware of a wide range of different careers.				
8. Training that includes work-related computer literacy.				
9. Work-related bilingual education.				
10. A vocational program that starts in high school and is continued at a community college.				

Appendix B (cont.)
Teacher Survey and Teacher Survey Data

	Not Important 1	Somewhat Important 2	Moderately Important 3	Extremely Important 4
11. Training in time management skills.				
12. Training in workplace money management.				
13. Training and practice in using mutual trust, respect and cooperation in the workplace.				
14. Experiences and training that help students learn how to work with customers in a respectful and helpful manner.				
15. Education in leadership skills.				
16. Training in how to resolve conflicts.				
17. A program that helps students develop self-initiative.				
18. Training in how to access, interpret, and communicate information relevant to job tasks.				
19. Training that helps students develop good work habits.				
20. Experiences and training in the skills necessary to interview for a job.				

21. Overall, how valuable do you believe a School to Work Program would be to Furr High School Students?

❑ Of little value ❑ Somewhat valuable ❑ Moderately valuable ❑ Extremely valuable

What other types of training or activities do you think should be included in a School to Work Program?

Appendix B (cont.)
Teacher Survey and Teacher Survey Data

School To Work Urban Opportunities
Teachers' Survey Results: Counts and Percentages

	Not Important 1		Somewhat Important 2		Moderately Important 3		Extremely Important 4	
	n	%	n	%	n	%	n	%
1. Training that helps students discover career opportunities.	0	0.0	1	5.0	7	35.0	12	60.0
2. Experiences that aid students in making decisions regarding careers.	0	0.0	1	5.0	5	25.0	14	70.0
3. Work site internships during the school year.	0	0.0	2	10.0	4	20.0	14	70.0
4. Summer internships at local businesses.	0	0.0	1	5.0	8	40.0	11	55.0
5. Opportunities to observe the daily activities of a specific job through one-on-one interactions with an employer (Job Shadowing).	0	0.0	2	10.0	7	35.0	11	55.0
6. Opportunity to learn a career through an apprenticeship.	1	5.0	4	20.0	6	30.0	9	45.0
7. Specialized field trips that help students become aware of a wide range of different careers.	1	5.0	5	25.0	7	35.0	7	35.0
8. Training that includes work-related computer literacy.	0	0.0	0	0.0	8	40.0	12	60.0
9. Work-related bilingual education.	2	10.0	6	30.0	4	20.0	8	40.0
10. A vocational program that starts in high school and is continued at a community college.	0	0.0	2	10.0	8	40.0	10	50.0
11. Training in time management skills.	1	5.0	1	5.0	12	60.0	6	30.0
12. Training in workplace money management.	0	0.0	5	25.0	5	25.0	10	50.0
13. Training and practice in using mutual trust, respect and cooperation in the workplace.	0	0.0	4	20.0	7	35.0	9	45.0
14. Experiences and training that help students learn how to work with customers in a respectful and helpful manner.	0	0.0	0	0.0	8	40.0	12	60.0
15. Education in leadership skills.	1	5.0	4	20.0	5	25.0	10	50.0
16. Training in how to resolve conflicts.	0	0.0	2	10.0	2	10.0	16	80.0
17. A program that helps students develop self-initiative.	0	0.0	2	10.0	6	30.0	12	60.0
18. Training in how to access, interpret, and communicate information relevant to job tasks.	0	0.0	0	0.0	9	45.0	11	55.0
19. Training that helps students develop good work habits.	0	0.0	2	10.0	6	30.0	12	60.0
20. Experiences and training in the skills necessary to interview for a job.	0	0.0	2	10.0	5	25.0	13	65.0

Appendix B (cont.)
Teacher Survey and Teacher Survey Data

School To Work Urban Opportunities
Students' and Teachers' Survey Results: Means

	Teachers		Students	
	n	Mean	n	Mean
1. Training that helps students discover career opportunities.	20	3.6	66	3.2
2. Experiences that aid students in making decisions regarding careers.	20	3.7	66	3.0
3. Work site internships during the school year.	20	3.6	66	2.9
4. Summer internships at local businesses.	20	3.5	66	3.0
5. Opportunities to observe the daily activities of a specific job through one-on-one interactions with an employer (Job Shadowing).	20	3.5	66	2.9
6. Opportunity to learn a career through an apprenticeship.	20	3.2	66	3.4
7. Specialized field trips that help students become aware of a wide range of different careers.	20	3.0	66	3.4
8. Training that includes work-related computer literacy.	20	3.6	66	3.0
9. Work-related bilingual education.	20	2.9	66	2.5
10. A vocational program that starts in high school and is continued at a community college.	20	3.4	66	3.1
11. Training in time management skills.	20	3.2	66	3.0
12. Training in workplace money management.	20	3.3	66	3.4
13. Training and practice in using mutual trust, respect and cooperation in the workplace.	20	3.3	66	3.1
14. Experiences and training that help students learn how to work with customers in a respectful and helpful manner.	20	3.6	66	2.9
15. Education in leadership skills.	20	3.2	66	3.4
16. Training in how to resolve conflicts.	20	3.7	66	3.1
17. A program that helps students develop self-initiative.	20	3.5	66	3.0
18. Training in how to access, interpret, and communicate information relevant to job tasks.	20	3.6	66	3.2
19. Training that helps students develop good work habits.	20	3.5	66	3.4
20. Experiences and training in the skills necessary to interview for a job.	20	3.6	66	3.3

Appendix C
Employer Survey and Employer Survey Data

School To Work Urban Opportunities
Employers' Survey

Below are a number of employee characteristics that employers have identified as important to them. Using the scale below, put a check in the box that best represents how well the School-to-Work students participating in the Career Preparation activites at your business exhibited each charateristic. Please feel free to add any comments along with your ratings of the following items.

Please complete and return this survey in the enclosed envelope .

	Not Present 1	Somewhat Present 2	Moderately Present 3	Completely Present 4
1. Exhibits appropriate time management skills.				
2. Is able to select goal-related activities and stay on task.				
3. Is able to do basic record keeping.				
4. Uses materials in a responsible manner.				
5. Works well as a member of a team.				
6. Is friendly and helpful to customers.				
7. Exhibits initiative.				
8. Is able to work toward agreements through compromise.				
9. Works well with people from diverse backgrounds.				
10. Is able to access, interpret, and communicate information relevant to job tasks.				
11. Displays good work habits.				
12. Is able to monitor and correct own performance in the workplace.				
13. Exert a high level of effort and persevere toward goal attainment.				
14. Believe in his or her own self-worth and maintains a positive view of self.				
15. Adapts well to different work situations.				
16. Exhibits honesty and trustworthiness.				

Appendix C (cont.)
Employer Survey and Employer Survey Data

School To Work Urban Opportunities
Employers' Survey Results: Counts and Percentages

	Not Present 1		Somewhat Present 2		Moderately Present 3		Completely Present 4	
	n	%	n	%	n	%	n	%
1. Exhibits appropriate time management skills.	0	0.0	3	12.5	10	41.7	11	45.8
2. Is able to select goal-related activities and stay on task.	4	16.7	5	20.8	10	41.7	5	20.8
3. Is able to do basic record keeping.	0	0.0	3	15.0	10	50.0	7	35.0
4. Uses materials in a responsible manner.	0	0.0	4	16.7	10	41.7	10	41.7
5. Works well as a member of a team.	3	12.5	4	16.7	10	41.7	7	29.2
6. Is friendly and helpful to customers.	2	13.3	2	13.3	6	40.0	5	33.3
7. Exhibits initiative.	5	20.8	7	29.2	7	29.2	5	20.8
8. Is able to work toward agreements through compromise.	2	8.3	2	8.3	14	58.3	6	25.0
9. Works well with people from diverse backgrounds.	3	12.5	6	25.0	10	41.7	5	20.8
10. Is able to access, interpret, and communicate information relevant to job tasks.	1	4.2	5	20.8	11	45.8	7	29.2
11. Displays good work habits.	1	4.2	3	12.5	10	41.7	10	41.7
12. Is able to monitor and correct own performance in the workplace.	3	12.5	5	20.8	8	33.3	8	33.3
13. Exerts a high level of effort and persevere toward goal attainment.	4	16.7	5	20.8	10	41.7	5	20.8
14. Believes in his or her own self-worth and maintains a positive view of self.	1	4.2	4	16.7	12	50.0	7	29.2
15. Adapts well to different work situations.	4	16.7	4	16.7	10	41.7	6	25.0
16. Exhibits honesty and trustworthiness.	0	0.0	5	20.8	11	45.8	8	33.3

Appendix C (cont.)
Employer Survey and Employer Survey Data

School To Work Urban Opportunities
Employers' Survey Results: Means

	n	Mean
1. Exhibits appropriate time management skills.	24	3.3
2. Is able to select goal-related activities and stay on task.	24	2.7
3. Is able to do basic record keeping.	20	3.2
4. Uses materials in a responsible manner.	24	3.3
5. Works well as a member of a team.	24	2.9
6. Is friendly and helpful to customers.	15	2.9
7. Exhibits initiative.	24	2.5
8. Is able to work toward agreements through compromise.	24	3.0
9. Works well with people from diverse backgrounds.	24	2.7
10. Is able to access, interpret, and communicate information relevant to job tasks.	24	3.0
11. Displays good work habits.	24	3.2
12. Is able to monitor and correct own performance in the workplace.	24	2.9
13. Exerts a high level of effort and perseveres toward goal attainment.	24	2.7
14. Believes in his or her own self-worth and maintains a positive view of self.	24	3.0
15. Adapts well to different work situations.	24	2.8
16. Exhibits honesty and trustworthiness.	24	3.1

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Appendix D: Student Academic Performance Data by School

The Percent of Students Passing the TAAS by School and Grade

	Math				Reading				Writting			
Elementary Schools	**1994***	**1995**	**1996**	**1997**	**1994***	**1995**	**1996**	**1997**	**1994***	**1995**	**1996**	**1997**
Clinton Park												
Grade 3	56	32	57	81	81	54	64	86				
Grade 4	19	47	63	50	56	55	58	81	67	86	68	76
Grade 5	33	44	91	80	47	32	100	80				
Grade 6	43	21	61	100	64	50	56	100				
Total	**38**	**37**	**65**	**74**	**61**	**48**	**66**	**84**	**67**	**86**	**68**	**76**
R. P. Harris												
Grade 3	81	37	58	50	77	52	68	69				
Grade 4	62	30	53	79	73	70	74	85	91	73	74	93
Grade 5	74	69	75	69	68	86	80	73				
Grade 6												
Total	**74**	**45**	**63**	**66**	**74**	**69**	**74**	**75**	**91**	**73**	**74**	**93**
Oates												
Grade 3	59	72	86	81	68	75	91	81				
Grade 4	44	50	80	75	75	61	74	75	88	88	86	88
Grade 5	63	60	76	94	83	76	81	94				
Grade 6	53	65	87	85	72	85	81	85				
Total	**56**	**61**	**82**	**84**	**76**	**74**	**82**	**84**	**88**	**88**	**86**	**88**
Pleasantville												
Grade 3	83	76	93	75	88	77	79	89				
Grade 4	58	71	98	83	84	80	96	90	100	93	98	100
Grade 5	63	61	95	84	92	74	91	90				
Grade 6	58	47	87	88	92	76	80	88				
Total	**70**	**69**	**95**	**81**	**89**	**77**	**87**	**89**	**100**	**93**	**98**	**100**

The Percent of Students Passing the TAAS by School and Grade

	Math				Reading				Writting			
Elementary Schools	**1994***	**1995**	**1996**	**1997**	**1994***	**1995**	**1996**	**1997**	**1994***	**1995**	**1996**	**1997**
Port Houston												
Grade 3	55	56	24	65	73	78	47	53				
Grade 4	40	17	47	63	57	46	50	63	86	59	100	68
Grade 5	23	25	56	67	59	72	52	86				
Grade 6		8	61	62		83	58	61				
Total	**44**	**24**	**50**	**63**	**71**	**66**	**53**	**64**	**86**	**59**	**100**	**68**
Whittier												
Grade 3	65	58	82	75	78	67	69	73				
Grade 4	26	42	71	79	52	65	76	79	90	79	71	82
Grade 5	35	49	85	88	64	70	85	84				
Grade 6												
Total	**43**	**49**	**80**	**80**	**68**	**68**	**76**	**78**	**90**	**79**	**71**	**82**
Middle Schools												
Edison												
Grade 6	56	37	59	54	59	54	50	60				
Grade 7	30	26	38	58	47	52	59	58				
Grade 8	31	21	42	47	44	48	47	63	29	43	40	63
Total	**39**	**26**	**43**	**53**	**50**	**50**	**53**	**61**	**29**	**43**	**40**	**63**
Holland												
Grade 6	45	37	59	57	50	56	61	66				
Grade 7	36	40	53	63	52	63	71	73				
Grade 8	28	29	46	49	52	63	64	76	47	57	69	73
Total	**37**	**36**	**52**	**56**	**52**	**61**	**66**	**72**	**47**	**57**	**69**	**73**
High School												
Furr												
Grade 10 (Total)	**23**	**25**	**34**	**41**	**44**	**52**	**45**	**71**	**59**	**63**	**54**	**77**

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